OPMP Pilot Survey "Questions about Malathion Use in Vegetable Production"

Section 1 - Demographic Questions

- 1. Regarding your specialization in vegetable production, please select all that apply: [If the respondent responds to Question 1 by selecting 1a-1f, continue to Question 2; otherwise skip to the end of the survey]
 - a) I work for an academic institution (e.g., professor, researcher, Extension Agent) and have been involved with vegetable production
 - b) I am a Certified Crop Advisor (CCA) and have been involved with vegetable production
 - c) I am a member of the National Alliance of Independent Crop Consultants (NAICC) and have been involved with vegetable production
 - d) I am currently an agricultural producer of vegetables
 - e) I was previously an agricultural producer of vegetables
 - f) Other (please specify): [text input field]
 - g) None of the above
- 2. Approximately how many years have you been involved with vegetable production?
 - a) <1 year
 - b) 1 < 5 years
 - c) 5 <10 years
 - d) 10 or more years
- 3. Approximately how many acres of vegetable production are you currently involved with?

[Numeric reply, bounded from below by 0]

4. In what state(s) are you currently involved with vegetable production? Choose all that apply.

[List of all states and territories, with check boxes]

<u>Section 2 - Questions about malathion use in vegetable production</u>

- 1. What vegetable production systems do you use malathion in? Choose all that apply.
 - a) Fruiting Vegetables (e.g. tomatoes, peppers, eggplants)
 - b) Cucurbit Vegetables (e.g. squash, cucumbers, pumpkins)
 - c) Leafy Vegetables (e.g. lettuce, spinach, leafy brassicas)
 - d) Other Brassica Vegetables (e.g. broccoli, cauliflower)
 - e) Root/Tuber Vegetables (e.g. potatoes, carrots, radishes)
 - f) Asparagus
 - g) Sweet Corn
 - h) Other (Please specify)

1B. How many applications of malathion (maximum) are needed per year to control any pests in the following types of vegetable crops?

[Question will only display Vegetable Crop rows associated with selection(s) to Section 2, Question 1 in a grid format]

	1	2	3	4	5	Greater than 5
Fruiting Vegetables						
Cucurbit Vegetables						
Leafy Vegetables						
Other Brassica Vegetables						
Root/Tuber Vegetables						
Asparagus						
Sweet Corn						
Other						

2. How many applications of malathion (maximum) are needed per year to control the following types of pests in any vegetable crops?

	1	2	3	4	5	Greater than 5	N/A
Caterpillars (Lepidopteran Pests)							
Beetles (Coleopteran Pests, including Adults or Larvae)							
Flies or Midges (Dipteran Pests)							
Aphids, Whiteflies, or Thrips							
Mealybugs or Scale							
Other 'true bugs' (Hemipteran pests like plant bugs, stink bugs, etc.)							
Mites							
Root zone soil pests (grubs, rootworms, seed maggots, wireworms, etc.)							
Other							

3. What are the target pest(s) that drive the use of maximum rates of malathion in the following vegetable crops? Choose all that apply:

[Question will only display Vegetable Crop rows associated with selection(s) to Section 2, Question 1 in a grid format]

	Caterpillars	Beetles	Flies or	Aphids,	Mealybugs	Other	Mites	Root	Other
			Midges	Whiteflies,	or Scale	'true'		zone soil	ĺ

		or Thrips	bugs	pests	
Fruiting Vegetables					
Cucurbit					
Vegetables					
Leafy Vegetables					
Other Brassica					
Vegetables					
Root/Tuber					
Vegetables					
Asparagus					
Sweet Corn					
Other					

- 4. What percentage of your acres is malathion used on as an aerial application or as a ground broadcast application?
 - a) aerial: [numeric reply, bounded from below by 0 and above by 100]
 - b) ground (broadcast): [numeric reply, bounded from below by 0 and above by 100]
 - c) ground (chemigation): [numeric reply, bounded from below by 0 and above by 100]
 - d) other: [numeric reply, bounded from below by 0 and above by 100]
- 5. What alternatives are available for the pests targeted by malathion in vegetables? Choose all that apply:
 - a) alternative organophosphates
 - b) carbamates
 - c) pyrethroids
 - d) neonicotinoids
 - e) non-insecticide alternative_
 - f) other, <u>[text input field]</u>
- 6. Were any of the following pesticide spraying practices or activities used to keep malathion application(s) on-target (i.e., reduce pesticide drift or runoff from treated fields)? Choose all that apply:
 - a) riparian buffers to water bodies
 - b) upwind swath offsets
 - c) drift reducing technology (e.g., low drift nozzles)
 - d) field runoff catchments
 - e) altering spray application timing for more favorable wind speed/wind direction conditions
 - f) other, <u>[text input field]</u>
- 7. Do use patterns for malathion in vegetables vary within the states that you operate in? [If the respondent responds to Question 5 by selecting a, continue to Question 6; otherwise skip to the end of the survey]
 - a) Yes

- b) No
- 8. Where within the states that you operate in is malathion typically used? Choose all that apply: [Question will display states associated with selection(s) to Section 1, Question 4 in a grid format]
 - the North West
 - the North East
 - the South West
 - the South East
 - the Center of the Region
 - other
- 9. Are there differences in application rates of malathion to vegetables within the states that you operate in? (If yes, please describe the differences.)
 - a) No, there are no differences
 - b) Yes, there are differences [text input field]
- 10. Are there differences in the frequency of applications of malathion to vegetables within the states that you operate in? (If yes, please describe the differences.)
 - a) No, there are no differences
 - b) Yes, there are differences [text input field]

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